FAX

Date 09/02/03

Number of pages including cover sheet 6

TO:

David J. Buttner
United States Patent and Trademark Office
P. O. Box 1450
Alexandria, VA 22313-1450

Phone 703-308-2403
Fax Phone 703-872-9311

FROM:

Craig H. Evans
DuPont Company
DuPont Legal, BMP25/2128
4417 Lancaster Pike
Wilmington, DE 19880-0025
U.S.A.

Phone 302-992-3219
Fax Phone 302-992-3257

CC:

REMARKS: ☐ Urgent ☐ For your review ☐ Reply ASAP ☐ Please Comment

A Response After Final for Application No. 09/960208 (Docket No. AD6597 US CIP) is attached.

RESPONSE UNDER 37 CFR 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 1712

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN THE APPLICATION OF:

ROBERT JOSEPH STATZ ET. AL.

CASE NO.: AD6597 US CIP APPLICATION NO.: 09/960208

CONFIRMATION NO.: 6480 GROUP ART UNIT: 1712

EXAMINER: DAVID J. BUTTNER FILED: SEPTEMBER 22, 2001

FOR: HIGHLY-RESILIENT THERMOPLASTIC ELASTOMER COMPOSITIONS

RESPONSE AFTER FINAL

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Attention: Mail Stop AF

Sir:

In response to the Office Action dated June 27, 2003, concerning the above-identified application, please favorably consider the following remarks.

Status

1. Claims 1 and 4 – 25 are pending,
2. Claims 6 and 7 are allowed,
3. Claims 12 and 14 – 18 are objected to, but would be allowable if in independent form including all limitations of the base claim and any intervening claims, and
4. Claims 1, 4, 5, 8 – 11, 13, and 19 – 25 are finally rejected under 35 U.S.C. §103(a) as being unpatentable over GB 2164342 in view of Chen '321 or WO 98/46671.

Applicants' arguments filed April 28, 2003, were not found to be persuasive. Applicants respectfully request that their arguments be further considered in view of the following remarks.

Rejection – GB 2164342 in view of Chen '321 or WO 98/46671

GB 2164342 does not suggest inclusion of monomeric organic acids. Chen '321 or WO 98/46671 (collectively Chen References) is used as a basis for modifying GB 2164342 to include monomeric organic acids.

Applicants provide the following comments on the points made by the examiner in finding Applicants' arguments non-persuasive, respectfully request reconsideration and allowance of all claims.

1. GB '342 has the necessary neutralization – GB '342 provides for a range of neutralization, but does, as pointed, out provide for 100% neutralization of the acid groups in the blends in Examples 2 – 5 (p. 2, ll. 49 – 50).

The examples pertain to blends of ethylene/acrylic acid copolymer (E/AA) believed to contain 20 wt.% copolymerized acid (p. 2, ll. 43 – 45), and a polyetheramide (p. 2, ll. 46 – 47). Table 2 indicates that the E/AA and polyetheramide are both present at 50 parts by weight (Examples 2 and 3) or that the E/AA is present at 70 parts by weight and the polyetheramide at 30 parts (Examples 4 and 5).

When the above blends are 100% neutralized (p. 2, ll. 49 – 50), one skilled in the art would expect that the E/AA would become an intractable phase in the continuous polyetheramide phase. It is this phenomenon (continuous polyetheramide phase) that permits the fully neutralized blend to be molded. It is well known that, without the polyetheramide, the 100% neutralized E/AA with 20% acid would not be moldable.

2. Chen does not teach metal stearates would not improve COR, etc., for highly neutralized ionomers – Chen may not teach such, but it does require that the ionomer be partially, not fully, neutralized (col. 3, ll. 65 – 67 of Chen ' 321). For the stearate to have an effect on the ionomer, the

ionomer must be melt-processable (see col. 4, ll. 16 – 19). A 100% neutralized 20% acid E/AA polymer is not melt-processable, so there would be no way to incorporate the stearate into the ionomer.

3. Highly neutralized ionomer/thermoplastic blend of GB '342 is processable even without metal stearate – Agreed, but the processability is because of the continuous polyetheramide phase (see 1. above).

4. Adding metal stearates to GB –342's 100% neutralized ionomer/thermoplastic blend, an overall neutralization of 100% remains – While this may be true, the metal stearate would not be expected to interact with the non-melt-processable ionomer, but would only be able to get into the thermoplastic portion (polyetheramide phase).

5. Adding metal stearates would be expected to improve performance – The art indicates that performance of a partially neutralized ionomer is improved. There is no suggestion that incorporating a metal stearate into a polyetheramide phase with no interaction with the 100% neutralized 20% acid E/AA would improve performance. Chen requires that the metal stearate interact with the ionomer for the improved performance.

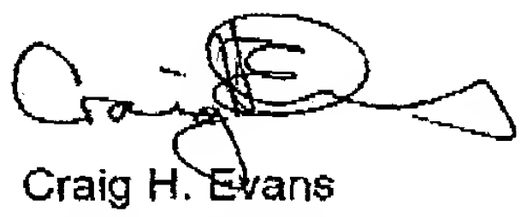
6. Chen does not require the use of stearic acid (rather than metal stearates) with higher neutralized ionomers – Agreed, but it does provide for the possibility. While Applicants see no motivation to use the stearic acid instead of metal stearate, it provides the only possible (although questionable) way that the intractable ionomer phase of GB '342 might be interacted with. It is likely that mass transfer issues would limit the ability of the stearic acid to react with the cations of the 100% neutralized ionomer phase other than possibly at the edges of the intractable phases. Chen would teach away from the reaction since it limits "suitable ionomers" to those partially neutralized (10 – 90%). But, assuming that the mass transfer issues could be overcome, the level of neutralization of the ionomer would decrease (see Chen '321, col. 6, ll. 37 – 46) and would, upon adding 10 to 45 wt.% as

provided in present claim 1, be expected to fall below the 95% of present claim 1.

Conclusion

Applicants hope that the above more complete explanation of the position taken in the April 28, 2003, is helpful in persuading the examiner that all the claims as presently included are allowable. If further discussion is needed, Applicants' attorney will gladly visit the examiner or entertain a telephone conversation. The Examiner is urged to contact Applicants' attorney by telephone at (302) 992-3219 if such would help in passing the case to allowance.

Respectfully submitted,



Craig H. Evans
Registration No. 31,825
Telephone: 302-992-3219
Facsimile: 302-992-3257

Dated: September 2, 2003

PTO/SB/97 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Certificate of Transmission under 37 CFR 1.8

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office

on September 2, 2003
Date

Jeanette Hancock
Signature

JEANETTE HANCOCK
Type or printed name of person signing Certificate

Note: Each paper must have its own certificate of transmission, or this certificate must identify each submitted paper.

09/960,208
AD6597 US CIP
Fax Cover Sheet
Response After Final (4 pages)